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(54) **Compact rear-projection system with obliquely incident light beam.**

(57) The volume of the housing of a rear-projection system can be reduced by 20 to 25 % when the light beam is obliquely incident on the projection screen. The obliquely incident light beam is deflected towards the viewing space by means of a prism plate (731).

By dividing the light-refracting action of the prism plate between the front and rear of the plate only a slight loss of light has to be accepted.

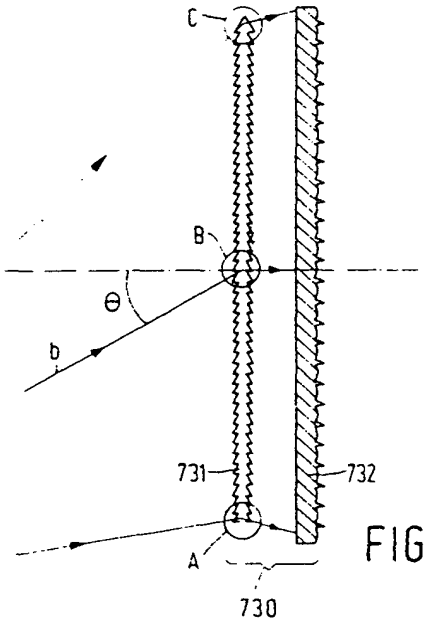

FIG.3

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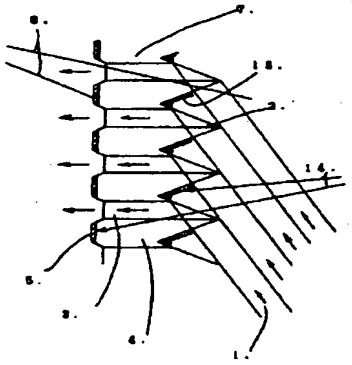
REAR PROJECTION TYPE SCREEN
5-72634 (A) (43) 26.3.1993 (19) JP
Appl. No. 3-233394 (22) 12.9.1991
SEIKO EPSON CORP (72) MASAKI ISHIKAWA(1)
Int. Cl⁵. G03B21/62,G02B27/00

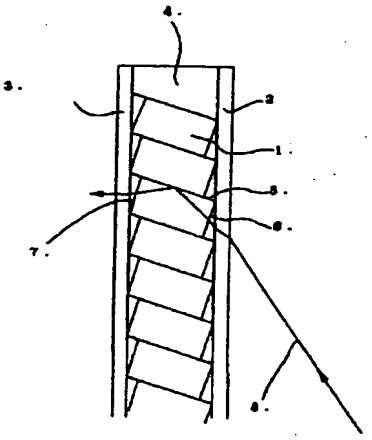
POSE: To obtain a high-contrast rear projection type display device by absorbing external light such as an indoor illumination light.
STITUTION: In this rear projection type screen for oblique projection obtained by forming a fine prism group 2 on a side on which projected light 1 is made incident, a light non-incident part on the side on which the projected light 1 is made incident is set as a light absorbing surface 15 and a light emitting surface 3 on an observation side is set as a lenticular lens group. And a light non-emitting part 4 is set as a light absorbing surface 5 for absorbing the external light.



6: illumination light, 7: screen

REAR PROJECTION TYPE SCREEN
5-72635 (A) (43) 26.3.1993 (19) JP
Appl. No. 3-233396 (22) 12.9.1991
SEIKO EPSON CORP (72) MASAKI ISHIKAWA(1)
Int. Cl⁵. G03B21/62,G02B26/08

POSE: To easily manufacture a rear projection type screen at a low cost by laminating long and slender fine members having the incident surface, the emitting surface and the reflecting surface of light at a prescribed angle and mutually adhering or holding them with transparent members, and thereby forming the screen.
STITUTION: This rear projection type screen is formed by laminating the long and slender fine members 1 whose cross sections are rectangular and which are provided with the incident surface 6, the emitting surface 7 and the reflecting surface 5 of the light by being obliquely inclined and interposing them by the transparent members 2-4 from the front and back and the top and bottom parts. In such a case, it is good that the fine members 1 are mutually made to adhere. In the case that the reflection of projected light on an air layer between the fine members 1 is not expected because of the adhesion, the reflecting surface 5 is previously formed by metal plating. Then, the projected light 8 made incident on the screen from an oblique direction is firstly transmitted through the rear transparent member 2, made incident from the light incident surface 6 of the fine member 1 and reflected on the reflecting surface 5. Thereafter, it is emitted from the light emitting surface 7, transmitted through the front transparent member 3 on which a lenticular lens is formed and outputted to an observer side from the front surface of the screen.



4: upper and lower transparent member